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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,474	07/14/2004	Robert Funk	75416	2130
26288	7590	05/18/2006	EXAMINER	
ALBIHNS STOCKHOLM AB BOX 5581, LINNEGATAN 2 SE-114 85 STOCKHOLM; SWEDEN STOCKHOLM, SWEDEN			VAUGHN, MEGANN E	
			ART UNIT	PAPER NUMBER
			2859	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

RD

Office Action Summary	Application No. 10/710,474	Applicant(s) FUNK, ROBERT	
	Examiner Megann E. Vaughn	Art Unit 2859	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/4/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4-12-2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the grain moisture meter in the reply filed on 5/4/2006 is acknowledged. The traversal is on the ground(s) that the grain moisture meter from claims 1-7 is the same grain moisture meter used in the method claim 8 to calculate density. The argument regarding claim 4-7 (group II) is persuasive. The argument with respect to claim 8 (group III) is not found to be persuasive because the apparatus disclosed in claims 1 through 7 drawn to a grain moisture meter could be used in a method for only measuring moisture since the calculation of density is not required to determine the moisture.

The requirement is still deemed proper and is therefore made FINAL.

2. Accordingly, claims 1-7 will be further examined on the merits. Claim 8 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because **reference character "7" has been used to designate both strike off element and a thread of conductive material**. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should

include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the **strike off element (7)** as described in the specification. Looking at Figures 1 and 2, it seems that the strike off element is some sort of sensor that is included in the temperature sensor meter (figure 2), when the specification, paragraph [0018], describes the strike off element as more of a mechanical device, such as a blade, used to scrap excess grains of the top of an over-flowing test cell into the bottom container. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief

description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **"means for transporting the bottom container from a delivery position to a loading position"** in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

It is unclear when referring to the specification and the drawings how the loading position in which the container is disposed on the weighing means (5) is inaccessible to an operator of the meter. Figure 1 shows the bottom container (4) on the weighing means (5), how are either inaccessible to an operator?

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funk et al (US 4121151) in view of Rosenthal (US 4487278).

Regarding claim 1, Funk et al discloses in figure 3, a grain moisture tester (20) comprising means (24) for introducing a grain sample (column 1, line 7) into a test cell (40), the test cell comprising means for measuring the dielectric constant of the grain sample (column 10, lines 15-18), and means (162) for calculating the moisture content of the sample based on the measure dielectric constant, including a strike off element, (106), for removing excess grains delivered to the test cell (column 5, lines 37-39), a bottom container (26) disposed under the test cell (40) and having such an extension, the entire bottom of the test apparatus as seen in figure 3, that grains removed from the test cell (40) by the strike off element (106) will fall into said container (26), means (column 3, lines 34-36) for unloading grains from the test cell into the container (26).

Funk et al does not disclose means for weighing the container and grain content.

Rosenthal discloses in figure 1; an instrument for measuring the weight of grain dumped out of the instrument into a weight scale (26). Therefore it would have been obvious to add beneath the container disclosed by Funk et al a the weight scale as disclosed by Rosenthal, in order to be able to measure the grain after its been disposed from the test cell to provide a test weight as taught by Rosenthal (column 1, lines 35-39, column 2, lines 49-65) that insures an accurate weight so when measuring other properties of the grain, the weight can be kept constant or results can be compared in terms of the weight/amount of grain sample.

Regarding claim 3, Funk et al discloses a sample drawer (26) slidable/removable from an accessible delivery position as shown in figure 1 to an inaccessible loading position in which the drawer is beneath the tester (20) (column 3, lines 36-37).

Funk et al does not disclose that the drawer (26) is disposed on the weighing means when in the loading position.

Rosenthal et al discloses in figure 1, an inaccessible weighing scale (26) disclosed in a loading position. Therefore it would have been obvious to add the weighing scale disclosed by Rosenthal et al beneath the removable container disclosed by Funk et al to measure the weight of the grains. Furthermore, in a broad sense, the operator of the device disclosed by Funk et al and Rosenthal is considered to be the means for transporting the bottom container since an operator will move the drawer (26) as needed.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funk et al (US 4121151) in view of Rosenthal (US 4487278) as applied to claims 1 and 3 above, and further in view of Le Gigan (US 5253512).

Funk et al and Rosenthal et al discloses a grain moisture tester as stated above in paragraph 9. Funk et al further discloses in figure 3, means for introducing a grain sample into a test cell comprising a top container hopper (24). Funk also discloses means (146, 147) for determining the temperature of the grain (column 8, lines 55-57).

Funk et al and Rosenthal do not disclose that the top container comprises means for determining temperature of the grain sample.

Le Gigan discloses in figure 1, a moisture meter for granular products that has a temperature sensor (column 4, lines 26-28) in the hopper (1). Therefore, it would have been obvious to a person having ordinary skill in the art at the time that the invention was made to replace the temperature sensor disclosed by Funk et al to the top container/hopper as taught by Le Gigan, in order to determine the initial temperature of the grain before it enters the test cell since the enclosed test cell could have an abnormally high temperature inside the test cell due to continuous use of the instrument causing the reading of the temperature of the grain to be higher than it should be and therefore, inaccurate.

11. Claims 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Funk et al (US 4121151) and Rosenthal (US 4487278) in view of Le Gigan (US 5253512), as applied to claim 2, and further in view of Tsuchiya (US 6951419).

Funk et al, Rosenthal, and Le Gigan disclose a grain measuring tester with means for determining temperature of a grain sample, as explained in paragraph 10.

Funk et al, Rosenthal, and Le Gigan do not disclose specifically that the temperature sensor comprises at least one elongate conductive element, having a resistance dependent on the temperature and being bent in a pattern so that it covers a certain area, a sensor for measuring the current flowing in the conductive element, and means for calculating the resistance of the conductive element based on the measured current and the temperature based on the calculated resistance value.

Tsuchiya discloses a temperature sensor comprising a least one elongate conductive wire (13 and column 2, lines 39-44), having a resistance dependent on the

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temperature (column 13, lines 1-5) and being bent in a pattern so that it covers a certain area (see figure 1, 13), a sensor for measuring the current (column 13, line 2, and figure 16, 249) flowing in the conductive element, and means for calculating the resistance of the conductive element based on the measured current and the temperature based on the calculated resistance value (column 13, lines 15-22).

Regarding claim 5, Tsuchiya discloses in figure 1, that the temperature sensor also includes a second elongate element (13), conductive wires, similar to the first and running parallel thereto and in the same plane (see figure 1, 13).

Regarding claim 7, Tsuchiya discloses that the temperature sensor includes one of the conductive wires made of copper (column 5, line 30).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time that the invention was made to use the type of temperature sensor, as taught by Tsuchiya above, as the temperature sensor in the top container/hopper disclosed by Funk et al and Le Gigan because Tsuchiya's sensor is a common type of temperature sensor which will provide the same function, i.e. temperature sensing, if used instead of the temperature sensor disclosed by Funk et al.

12. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Funk et al (US 4121151), Rosenthal (US 4487278), Le Gigan (US 5253512), and Tsuchiya (US 6951419) as applied to claims 4, 5, and 7 above, and further in view of Payne et al (US 5041809).

Funk et al, Rosenthal, Le Gigan, and Tsuchiya disclose a grain moisture tester with a temperature sensor comprising at least one elongate conductive element as mentioned in paragraph 11 above.

Funk et al, Rosenthal, Le Gigan, and Tsuchiya do not disclose specifically that the elongate conductive element runs in a meandering path.

Payne et al discloses in figure 2A, an elongate conductive element that runs in a meandering/serpentine path (14). Therefore, it would have been obvious to a person having ordinary skill in the art at the time that the invention was made to run Tsuchiya's wires in a meandering pattern as taught by Payne et al to provide a long conductive element to completely cover a limited surface area (column 4, lines 10-12).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Johnston (US 3545281) discloses a method and apparatus for analyzing a particulate material where the bottom container for collecting the grains has an attached weighing scale, Campbell et al (US 5487702) discloses a grain weighing and measuring system, Falbo et al (US 6570395) discloses a portable grain moisture meter, Olmstead et al (US 5957773) discloses a method and apparatus for measuring grain characteristics, Resh (US 3781673) discloses a grain moisture tester, Stein (US 2251641) discloses an apparatus for testing grain-like materials, and Fathauer (US 3761810) discloses a digital reading moisture tester.

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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Megann E. Vaughn whose telephone number is 571-272-8927. The examiner can normally be reached on 8 am- 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MEV
5/15/2006


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